

What is claimed is:

1. A data storage system comprising at least one data sending/receiving node and a relay node being provided between said data sending/receiving node and a network, which is for relaying data between said data sending/receiving node and said network, comprising:

5 a meta-data registering means for registering data processes which should be conducted in said relay node as meta-data, and

a data processing means for conducting data process in accordance with the processes defined by the meta-data registered in said meta-data registering means;

10 wherein meta-data designated by said data sending/receiving node is selected from said meta-data registering means, and data sent from said data sending/receiving node or data received by said data sending/receiving node are processed in accordance with the processes defined by the selected meta-data.

2. A data storage system according to Claim 1, wherein said relay node comprises a sending/receiving data memory means for storing data sent/received by said data sending/receiving node via said relay node, wherein said meta-data registering means registers meta-data, which define processes for automatically storing data sent/received from/by said data sending/receiving node, in said sending/receiving data memory means, and wherein data sent/received from/by said data sending/receiving node via said relay node is automatically stored in said sending/receiving data memory means.

3. A data storage system according to Claim 1, wherein meta-data defining processes for converting the data format of the data sent from said data sending/receiving node to a data format required by a destination of the data is registered in said meta-data registering means, and wherein when said data sending/receiving node sends data via said relay node, the data format of said data is converted to a format required by the destination in said relay node.

4. A data storage system according to Claim 1, wherein meta-data, which define processes for converting the data format of the data sent from an origin to a data format used in said data sending/receiving node, are registered in said meta-data registering means, and wherein when said data sending/receiving node receives data via said relay node, the data format of said data is converted to the format of the data sending/receiving node in said relay node.

5. A data storage system according to Claim 1, wherein meta-data, which define processes for conducting a virus check about data received by said data sending/receiving node, are registered in said meta-data registering means, and wherein data received by said data sending/receiving node is subjected to a virus check in accordance with the processes defined by the meta-data for virus checking in said relay node.

6. A data storage system according to Claim 1, wherein meta-data, which define processes for backing up about data dealt in said data sending/receiving node, are registered in said meta-data registering means, and wherein data dealt in said data sending/receiving node are backed up in accordance with the processes defined by the meta-data for backing up in said relay node.

7. A data storage system according to Claim 1, wherein said relay node further comprises a function for preventing irregular access to said data sending/receiving node, and/or, a function to split the load of communication lines between said relay node and said data sending/receiving node.

8. A data storage system according to Claim 7, wherein said relay node further comprises a function for preventing data leakage of data sent/received from/by said data sending/receiving node, a function for deleting unnecessary data included in data sent/received from/by said data sending/receiving node, and a function for obtaining a communication log of data sent/received from/by said data sending/receiving node, and wherein said relay node carries out one or more of the functions in accordance with a request from said data sending/receiving node.

9. A data storage system according to Claim 1, wherein said system further comprises a charge calculating means for calculating a charge for using the system for each data sending/receiving node, wherein the charge for using the system is calculated on the basis of the number of times which the data processing means in the data relay node conducts data process and/or the type of the process that the data processing means conducts.

10. A data storage system according to Claim 1, wherein said system further comprises a charge calculating means for calculating a charge for using the system for each data sending/receiving node, wherein the charge for using the system is calculated on the basis of using the amount of computer resources in the relay node.